# Math on the Fly!

NAME: _____     DATE: _____

## Evaluating Multivariate Functions

Evaluate and find each function value.

**1.** $f(x,y) = -2xy^2$

a. Find $f(2,-3)$
b. Find $f(12,1/4)$

**2.** $f(x,y) = 72x^2y^3$

a. Find $f(2/3,1/2)$
b. Find $f(-1,-2)$

**3.** $f(x,y) = \dfrac{x^3 - y}{|x - y|}$

a. Find $f(-5,1)$
b. Find $f(2,-1)$

**4.** $f(x,y) = 50x^2 + 8y$

a. Find $f(3/5,7/8)$
b. Find $f(0.2,0.25)$

**5.** $f(x,y,z) = x^2yz^3$

a. Find $f(3/4,2,4)$
b. Find $f(-3,-2,-1)$

**6.** $f(x,y,z) = 48xyz$

a. Find $f(-1,-5/6,-1/2)$
b. Find $f(1/16,-3,2)$

**7.** $f(x,y,z) = 2^x3^y4^z$

a. Find $f(-2,0,3)$
b. Find $f(4,2,-1)$

**8.** $f(x,y,z) = x^3y^4z^2$

a. Find $f(-1,2,10)$
b. Find $f(5,1/5,10)$

# SOLUTIONS

1.    a. f(2,–3) = –36
      b. f(12,1/4) = –3/2 or –1.5

2.    a. f(2/3,1/2) = 4
      b. f(–1,–2) = –576

3.    a. f(–5,1) = –21
      b. f(2,–1) = 3

4.    a. f(3/5,7/8) = 25
      b. f(0.2,0.25) = 4

5.    a. f(3/4,2,4) = 72
      b. f(–3,–2,–1) = 18

6.    a. f(–1,–5/6,–1/2) = –20
      b. f(1/16,–3,2) = –18

7.    a. f(–2,0,3) = 16
      b. f(4,2,–1) = 36

8.    a. f(–1,2,10) = –1600
      b. f(5,1/5,10) = 20